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Indian Standard

**SPECIFICATION AND SAFETY
REQUIREMENTS FOR RIGID SIDED
PLAYPENS**

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Indian Standard

SPECIFICATION AND SAFETY REQUIREMENTS FOR RIGID SIDED PLAYPENS

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Indian Standard
**SPECIFICATION AND SAFETY
REQUIREMENTS FOR RIGID SIDED
PLAYPENS**

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 30 July 1971, after the draft finalized by the Furniture Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 This Indian Standard giving the safety features to be considered while purchasing a child's playpen, also gives general safety requirements and has been issued as a guide to both purchasers and manufacturers. It is not desired to inhibit the advancement of design and, therefore, only safety aspects have been dealt with. The provisions regarding use of materials have been kept unrestricted to allow the manufacturer scope for improvement of designs.

0.3 In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country.

0.4 This standard is one of a series of Indian Standards on furniture. Other standards published so far in the series are given on fourth cover page.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS:2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard specifies requirements for rigid sided playpens for young children and it also includes safety requirements.

*Rules for rounding off numerical values (*revised*).

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2. MATERIALS

2.1 The materials shall be such that they do not present sharp edges, are not sufficiently flexible as to be distorted by the child applying reasonable force and have no deleterious effect on the child's health if in contact with the child's mouth or bare flesh. The materials used, if tested by an appropriate Indian Standard flammability test for the material concerned shall not show that they would contribute appreciably to the intensity of a fire.

3. FINISH

3.1 Metal Components

3.1.1 All dents, burrs and sharp edges shall be removed from the various components and these shall be pickled, scrubbed and rinsed to remove grease, rust, scale or any other foreign elements.

3.1.2 After pickling and rinsing, all the mild steel parts shall be given a phosphating treatment in accordance with IS : 3618-1966* followed by a coat of red oxide primer.

3.1.3 Putty, if necessary for filling and smoothening the surface, may be applied. It shall conform to IS : 426-1961†.

3.1.4 Two coats of enamel paint shall then be applied as follows:

- a) Undercoat, and
- b) Finish coat with synthetic stoving enamel conforming to IS : 2932-1964‡.

3.1.4.1 The components shall thereafter be baked at a specified temperature in an oven heated uniformly. The finish shall be smooth and uniform with a hard and tough film of enamel strongly adhering to the surface. The finish shall be free from all visible defects and the film shall not chip when tapped lightly with a pointed instrument.

NOTE — The paints or enamels used shall be lead-free.

3.1.5 Aluminium parts in the chair may be anodized, if required by the purchaser.

3.1.5.1 Aluminium primer shall conform to IS : 2931-1964§.

*Specification for phosphate treatment of iron and steel for protection against corrosion.

†Specification for paste filler for colour coats (*revised*).

‡Specification for enamel, synthetic, exterior, Type I, (a) undercoating, (b) finishing, colour as required.

§Specification for ready mixed paint, brushing, aluminium-zinc oxide composite primer.

3.1.6 Welding of aluminium parts shall be in accordance with IS : 2812-1964*.

3.1.7 All components shall be finished in colour as agreed to between the purchaser and the manufacturer.

3.2 Wooden Components

3.2.1 Wood panel components shall be given a coat of primer paint and filler. Wood putty shall be applied to all the surfaces requiring filling and shall conform to the relevant Indian Standards. After preparing the surfaces two coats of enamel paints, that is, one undercoat and one finishing coat, shall be given. The finishing coat shall be synthetic air-drying or suitable stoving enamel conforming to the air-drying or stoving paints for wood work. The enamel or paint shall be of exterior type and of a finish and colour as required.

3.2.2 The finish shall be smooth, uniformly applied and free from visible defects. It shall be well based and shall not readily chip or flake. The dry film thickness shall be not less than 0.10 mm.

3.2.3 All others components shall be finished in colour as agreed to between the purchaser and the manufacturer.

4. CONSTRUCTION

4.1 The bars or slats shall all be vertical and no vertical open space shall be more than 100 mm nor less than 75 mm wide.

4.1.1 There shall be no intermediate horizontal bars between the top and bottom ones.

4.1.2 The playpens shall be provided with some form of floor which may be either permanently attached or detachable. It shall be so designed that the child cannot move the frame across the floor when placed inside the playpen, nor shall it be possible for the weight of a child leaning against the side to tilt the playpen out of the vertical.

4.1.3 The playpen shall not be provided with more than two casters or any other item on the base that will mitigate against it remaining firmly and without movement on the floor.

4.1.4 The bars and other constructional features shall be sufficiently rigid and robust that the child cannot detach them or distort them either permanently or temporarily.

4.1.5 Fastening devices shall be of a type not easily undone by the occupant from inside the playpen.

*Recommendations for manual tungsten inert-gas arc-welding of aluminium and aluminium alloys.

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4.1.6 The top rim of the frame shall not present any projecting ends or other features on which the child's clothing could become caught, thereby introducing risk or strangulation.

5. DIMENSIONS

5.1 The playpen shall not be less than 60 mm high from its floor to the top of the rail.

6. MARKING

6.1 The playpen shall be marked with a suitable mark identifying the manufacturer.

6.1.1 The playpen may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

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AMENDMENT No 1 June 76

TO

IS: 6179-1971 SPECIFICATION AND
SAFETY REQUIREMENTS FOR
RIGID SIDED PLAYPENS

Corrigenda

[Page 4, clause 3.1.4(b)] - Substitute 'IS: 151-1950[†]' for 'IS: 2932-1964[†]'
(Page 4, foot-note with '†' mark) - Substitute the following for the
existing foot-note with '†' mark

'† Specification for ready mixed paint, spraying, finishing, stoving,
enamel, for general purposes, colour as required.

AMENDMENT NO. 2 JUNE 1978
TO
IS : 6179-1971 SPECIFICATION AND SAFETY
REQUIREMENTS FOR RIGID SIDED PLAYPENS

Alteration

(*Page 4, clauses 3.1.4 and 3.1.4.1 (see also Amendment No. 1)*] —
Substitute the following for the existing clauses:

3.1.4 Two coats of enamel paint shall then be applied as follows:

- a) Undercoat conforming to IS : 149-1950^{||}, IS : 2932-1975[¶] or IS : 2933-1975^{**}, and
- b) Finish coat with enamels conforming to IS : 151-1950[‡], IS : 2932-1975[¶] or IS : 2933-1975^{**}.

3.1.4.1 In the case of stoving enamel the components shall thereafter be baked at a specified temperature in an oven heated uniformly. The finish shall be smooth and uniform with a hard and tough film of enamel strongly adhering to the surface. The finish shall be free from all visible defects and the film shall not chip when tapped lightly with a dull pointed instrument.'

Addendum

[*Page 4, foot-notes (see also Amendment No. 1)*] — Add the following new foot-notes:

^{||}Specification for ready mixed paint, spraying, undercoating, stoving, for enamels and general purposes, colour as required.

[¶]Specification for enamel, synthetic, exterior, (a) undercoating, (b) finishing (*first revision*).

^{**}Specification for enamel, exterior, (a) undercoating, (b) finishing (*first revision*).

AMENDMENT NO. 3 MAY 1980
TO
IS : 6179 - 1971 SPECIFICATION AND SAFETY
REQUIREMENTS FOR RIGID SIDED PLAYPENS

Alterations

(*Page 4, clauses 3.1.1 and 3.1.2*) — Substitute the following for the existing clauses:

“3.1.1 All dents, burrs and sharp edges shall be removed from various components. The components shall be individually pickled, scrubbed and rinsed to remove grease, rust, scale or any other foreign element.

3.1.2 Immediately after pickling, all the mild steel parts shall be given phosphating treatment conforming to Class C of IS : 3618-1966*. The process for application of phosphate coating shall be in accordance with IS : 6005-1970 ‘Code of practice for phosphating of iron and steel’.”

[*Page 4, clause 3.1.4 (see Amendments No. 1 and 2)*] — Substitute the following for the existing clause:

‘3.1.4 Coat/coats of enamel paint shall then be applied as follows:

Finish coat with enamels conforming to IS : 151-1950‡, IS : 2932-1974¶ or IS : 2933-1975**.’

Addendum

(*Page 6, clause 5.1*) — Add the following new clauses after 5.1 and renumber the subsequent clauses accordingly:

“6. PERFORMANCE REQUIREMENTS OF FINISH

6.1 Scratch Hardness Test — A sample of mild steel plate 150 × 50 mm in size and thickness 0.315 mm finished as described in 3 shall be subjected to scratch hardness test in accordance with 15.1 of IS : 101-1964 ‘Methods of test for ready mixed paints and enamels (*second revision*)’. A scratch, showing the bare metal shall not be produced on the test sample.

6.2 Pressure Test — Samples prepared from mild steel plates of thickness 0.315 mm and finished as described in 3 shall be subjected to pressure test in accordance with 15.2 of IS : 101-1964. The metal surface shall not be rendered visible when the test pieces are separated after the test.

6.3 Flexibility and Adhesion on Test — A sample of mild steel plate 150×50 mm in size and thickness 0.315 mm finished as described in 3 shall be subjected to flexibility and adhesion test in accordance with 16 of IS : 101-1964. The paint film on the test piece shall not show damage, detachment or cracking when examined under $\times 10$ magnification.

6.4 Stripping Test — A sample of mild steel plate 150×50 mm in size and thickness 0.315 mm and finished as described in 3 shall be subjected to stripping test in accordance with 17 of IS : 101-1964. The scratch produced after the test shall be free from jagged edges.

6.5 Test for Protection Against Corrosion under Conditions of Condensation — A mild steel panel of size 150×100 mm and thickness 1.25 mm finished as described in 3 shall be subjected to test for protection against corrosion under conditions of condensation in accordance with 18 of IS : 101-1964. The metal surface shall show no signs of corrosion after the test."

(BDC 35)